



Materials Declaration Form

IPC Form Type *	1752 Distribute	Version	2
Sectionals *	Material Info Manufacturing Info	Subsectionals *	A-D
<i>* : Required Field</i>			

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	03/16/2015
Contact Name *	Refer to "Supplier Comment" section	Contact Title	Refer to "Supplier Comment" section
Contact Phone *	Refer to "Supplier Comment" section	Contact Email *	Refer to "Supplier Comment" section
Authorized Representative *	Giuseppe Vitali Palma	Representative Title	AMS & IPD Materials Declaration Champion
Representative Phone *	Refer to "Supplier Comment" section	Representative Email *	Refer to "Supplier Comment" section
Supplier Comment	Online Technical Support - STMicroelectronics : http://www.st.com/internet/com/support/online_tech_support.jsp		

Uncertainty Statement

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Legal Statement

Supplier Acceptance *	true	Legal Declaration *	Standard
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Legal Statement

Supplier certifies that it gathered the provided information and such information is true and correct to the best of its knowledge and belief, as of the date that Supplier completes this form. Supplier acknowledges that Company will rely on this certification in determining the compliance of its products. Company acknowledges that Supplier may have relied on information provided by others in completing this form, and that Supplier may not have independently verified such information. However, in situations where Supplier has not independently verified information provided by others, Supplier agrees that, at a minimum, its suppliers have provided certifications regarding their contributions to the part(s), and those certifications are at least as comprehensive as the certification in this paragraph. If the Company and the Supplier enter into a written agreement with respect to the identified part(s), the terms and conditions of that agreement, including any warranty rights and/or remedies provided as part of that agreement, will be the sole and exclusive source of the Supplier's liability and the Company's remedies for issues that arise regarding information the Supplier provides in this form.

Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
	A677*L693EA6	A	MU1A	03/16/2015
Amount	UoM	Unit type	ST ECOPACK Grade	
1911.240	mg	Each	ECOPACK® 1	

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		
3	245	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NAC	Tin (Sn), matte	Copper Alloy		



Package Designator	Size	Nbr of instances	Shape	
DSO	3.15X15.90X11.00	16	gull wing	
Comment	Package: PowerSO 20 .43 SLUG DOWN; MD valid for L298P013TR, L298P			

QueryList : ROHS directive 2011/65/EU _ July 2011	
Query	Response
Product(s) meets EU RoHS requirement without any exemptions	false
Product(s) meets EU RoHS requirements except lead in solder and this usage may qualify under the lead in solder '7b' exemption (other selected exemptions may apply)	false
Product(s) meets EU RoHS requirements by application of the selected exemption(s)	true
Product(s) does not meet EU RoHS requirements and is not under exemptions	false
Product(s) is obsolete, no information is available	false
Product(s) is unknown, no information is available	false
Exemption Id.	Description
7a	Lead in high melting temperature type solders (i.e. lead- based alloys containing 85 % by weight or more lead)

QueryList : REACH-17th December 2014				
Query				Response
The product does not contain REACH Substances Of Very High Concern above the limits per the definition within REACH				true
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product

Material Composition Declaration						Mfr Item Name	A677*L693EA6					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
die (s)	Other inorganic materials	6.796	mg	supplier	die	Silicon (Si)	7440-21-3		6.586	mg	969099	3446
die (s)				supplier	metallization	Aluminium (Al)	7429-90-5		0.082	mg	12066	43
die (s)				supplier	passivation	Silicon Nitride (SiN)	68034-42-4		0.028	mg	4120	15
die (s)				supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.037	mg	5444	19
die (s)				supplier	back side metallization	Chromium (Cr)	7440-47-3		0.005	mg	736	3
die (s)				supplier	back side metallization	Gold (Au)	7440-57-5		0.013	mg	1913	7
die (s)				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.045	mg	6622	24
Leadframe	Copper & its alloys	425.907	mg	supplier	alloy	Copper (Cu)	7440-50-8		421.057	mg	988613	220306
Leadframe				supplier	alloy	Iron (Fe)	7439-89-6		0.422	mg	991	221
Leadframe				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.126	mg	296	66
Leadframe				supplier	metallization	Silver (Ag)	7440-22-4		4.302	mg	10101	2251
Soft solder	Other organic materials	3.418	mg	JIG R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	3.333	mg	975132	1744
Soft solder				supplier	solder	Silver (Ag)	7440-22-4		0.051	mg	14921	27
Soft solder				supplier	solder	Tin (Sn)	7440-31-5		0.034	mg	9947	18
Bonding wire	Other inorganic materials	3.204	mg	supplier	wire	Gold (Au)	7440-57-5		3.204	mg	1000000	1676
encapsulation	Other organic materials	1470.259	mg	supplier	mold compound	Silica, vitreous	60676-86-0		1087.992	mg	740000	569260
encapsulation				supplier	mold compound	epoxy resin	na		132.324	mg	90000	69235
encapsulation				supplier	mold compound	Epoxy Cresol Novolak	29690-82-2		17.643	mg	12000	9231
encapsulation				supplier	mold compound	Phenol resin	9003-35-4		88.215	mg	60000	46156
encapsulation				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		88.215	mg	60000	46156
encapsulation				supplier	mold compound	Antimony Trioxide	1309-64-4		29.405	mg	20000	15385
encapsulation				JIG I	mold compound	Brominated Epoxy Resin	68541-56-0		22.054	mg	15000	11539
encapsulation				supplier	mold compound	Carbon Black	1333-86-4		4.411	mg	3000	2308
connections coating	Solder	1.656	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		1.656	mg	1000000	866